

### REMARKS

The above amendments and following remarks are submitted in response to the official action of the Examiner mailed April 6, 2006. This amendment is deemed to fully respond to all objections and rejections of the Examiner. Thus, claims 1-25, being all pending claims, are now expected to be in condition for allowance. Entry of this amendment and reconsideration to that end is respectfully requested.

As has been previously explained and is highlighted throughout the specification and drawings, it is critical to Applicants' invention to employ an overall video on demand system architecture which promotes efficiency and modularity. Efficiency is greatly enhanced by handling the input/output intensive video streaming function with one or more relatively simple video processors having a first hardware and software architecture, and assigning the remainder of the data processing functions to a relatively versatile and complex large scale computer having a different, second hardware and software architecture. Modularity is enhanced by this approach, because the additional input/output intensive video streams arising from an increased subscriber base are easily accommodated through the addition of more video processors. The load on the transaction processor, on the other hand, will be most easily increased by additional functionality, which is accommodated in a normal data

processing approach by adding memory, instruction processors, and application software.

During operation, the video processor limits its activity to streaming video from a temporary memory to the subscribers. All other functions are performed by the transaction processor, including spooling requested video programs into the temporary memory. Thus, as the number of subscribers increases, the number of video processors can be easily increased. On the other hand, as the available on demand functions increase (e.g., larger video library, added gaming features, etc.), the multi-processor transaction server is increased in capacity by adding standard multi-processor system resources.

Efficiency is further enhanced by limiting the handling of the video programming data. The transaction processor handles the video program data only a single time in a non-real time fashion to spool the requested program into the temporary memory. The video processors handle the video program data only a single time to stream the data from the temporary memory to the requester in real time. Thus, for a given request, the transaction processor at most handles the video program data once and the video processor handles the same video program data once.

Claims 1-2, 4-6, 10-12, and 14-25 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,790,176, issued to Craig (hereinafter referred to as "Craig").

This ground of rejection is respectfully traversed for failure of Craig to meet the requirements of MPEP 2131.

The standards for a finding of anticipation during examination are specified in MPEP 2131, which provides in part:

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH  
EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

"The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added)

The rejection is respectfully traversed because Craig does not show " the identical invention.....in as complete detail as is contained in the claim[s]".

Claim 1 is a Jepson-type independent apparatus claim having three major improvement elements. Craig has none of these three elements.

The first element is "a first processor having a first hardware architecture optimized to perform a variety of computational tasks which spools said requested video data in response to said request". In making his rejection, the Examiner states:

A 1<sup>st</sup> processor (350, 370 of Fig. 2, 3A or gateway 572 of Fig. 5) having a 1<sup>st</sup> hardware architecture optimized to perform a variety of computational task (sic), which spools the requested video data in sponse to the request (Col. 13, lines (sic) 45-Col. 14, lines (sic) 30); (emphasis added)

Thus, the Examiner has apparently found that each of elements 350, 370, and 572 separately and individually correspond to the claimed "first processor", because he has chosen the disjunctive "or" rather than the conjunctive "and". This finding is clearly erroneous, because none of these three elements (i.e., 360, 370, or 572) has any "hardware architecture" described by Craig, so none is taught to be "optimized to perform a variety of computational tasks" as claimed.

Even more apparent, none of elements 350, 370, or 572 "spools the requested video data" as claimed. Therefore, the Examiner provides an extensive citation (i.e., column 13, line 45, through column 14, line 30) which says nothing of the operation of element 572 and establishes that neither element 350 nor element 370 has anything to do with the claimed spooling function.

Concerning element 350, column 14, lines 21-23, of Craig states:

Interactive Processor 350 processes incoming commands from subscribers sites once a session is established by the Gateway. (Emphasis added)

"Once a session is established" can only occur after spooling has been performed and streaming has begun.

Regarding element 370, Craig, column 14, lines 26-30, states:

The incoming data is interrogated for content and selectively forwarded to the appropriate module for

processing: Session Manager 310 for Video-on-Demand and other retrieval applications and to Multi-Media Application Processor 370 for Multi-Media Application.  
(Emphasis added)

Thus, Multi-Media Application Processor 370 does not even receive incoming Video-on-Demand data. Therefore, none of the alternative elements of Craig (i.e., 350, 370, and 572) shows "the identical invention.....in as complete detail as is contained in the claim" as required by MPEP 2131.

The second claimed element is "a video server memory responsively coupled to said first processor in which said spooled requested video data is stored". In making his rejection, the Examiner cites Figs. 2, 3B, and 5, element 270. Though element 270 is shown in Figs. 2 and 3B, it does not appear in Fig. 5. None of these three Figures shows the claimed coupling to elements 350, 370 and 572 which are alleged by the Examiner to be the claimed "first processor". Furthermore, none of these three Figures teaches the claimed storage of the spooled requested video data. Therefore, none of these three Figures shows "the identical invention.....in as complete detail as is contained in the claim" as required by MPEP 2131.

The third claimed element is "a second processor having a second hardware architecture different from said first hardware architecture optimized to perform input/output operations responsively coupled to said video server memory and said

subscriber receiver which accesses said spooled requested video data directly from said video server memory without passing through said first processor and streams said spooled requested video data to said plurality of subscriber receivers in a plurality of streams spaced apart by a predetermined time".

Again, the Examiner has apparently find alternative elements (i.e., elements 330 and 541) which meet the limitations of Applicants' claimed third element (i.e., "second processor"). However, Craig says nothing of the architectures of these two elements, so it cannot be determined if they are optimized as claimed or if they are different from the claimed "first hardware architecture". Neither of these elements is even directly coupled to element 270 which the Examiner has found to be the claimed "video server memory". And neither of these elements is taught by Craig to "stream" the "spooled requested video data" to the subscriber as claimed.

For some unexplained reason, the Examiner further cites column 13, lines 45-61, column 15, lines 8-20, and column 16, lines 60-65, of Craig. None of these citations mentions either element 330 or element 541. Therefore, neither of the alternative elements of Craig (i.e., 330 and 541) shows "the identical invention.....in as complete detail as is contained in the claim" as required by MPEP 2131. Therefore, the rejection of claim 1, and all claims depending therefrom, is respectfully

traversed for failure of Craig to meet the requirements of MPEP 2131.

Claim 2 depends from claim 1 and further limits the claimed "video server memory" to "a commercial computer memory platform". Having found that Craig element 270 corresponds to the claimed "video server memory" (see rejection of claim 1), the Examiner cannot possibly find that Craig meets this further limitation. Therefore, the Examiner cites Fig. 5 with associate memory, which has nothing to do with his finding of element 270 as the claimed "video server memory" and has nothing to do with the claimed "commercial computer memory platform". The rejection of claim 2 is respectfully traversed for failure of Craig to meet the requirements of MPEP 2131.

Claim 4 depends from claim 1 and further limits the claimed first processor to a "transaction server" coupled to a "subscribing receiver" and the "video server memory". Having previously found that elements 350, 370, and 572 each correspond to the claimed "first processor" (see rejection of claim 1), the Examiner appears to deem only element 572 appropriate to this further limitation of the claimed "first processor". In making his rejection, the Examiner cites Craig, column 16, lines 33-55, which clearly establishes that gateway 572 cannot meet the limitations of the claimed "first processors". The rejection of claim 4 is respectfully traversed.

Claim 5 depends from claim 4 and further limits the claimed "requested video data". As explained above, Craig cannot meet the limitations of claim 4 from which claim 5 depends. Therefore, Craig cannot meet the limitations of claim 5. The rejection of claim 5 is respectfully traversed.

Claim 6 is an independent apparatus having four basic elements. In making his rejection, the Examiner states:

Claim 6, is analyzed with respect to claims 1 and 4 in which Craig further discloses two subscribing television receivers (Fig. 1) each of which providing a separate spaced apart service request for a video program (Col. 16, lines (sic) 55-Col,17, lines (sic) 6). (Emphasis added)

Thus, in addition to the clearly erroneous findings of fact and errors of law utilized in rejecting claims 1 and 4, the Examiner adds to it alleging "Craig further discloses two subscribing television receivers" at Fig. 1. Craig actually shows two subscriber destinations 100 and 120, wherein subscriber destination has a computer terminal 108 for receipt of multi-media transmissions. Therefore, Craig does not have "two subscribing television receivers" as alleged by the Examiner.

The last claimed element is limited by "streams said spooled video program to said two subscribing television receivers as two separate spaced apart streams from said copy of said video program wherein said two separate spaced apart streams are spaced apart from each other by a time period which is greater than zero". This limitation is clearly not shown by Craig, so the



Examiner has apparently ignored the limitation. The rejection of claim 6, and all claims depending therefrom, is respectfully traversed.

Claim 10 depends from claim 6 and further limits the claimed transaction server. For the reasons stated above, Craig does not have the claimed transaction server. Therefore, Craig cannot have these further limitations. The rejection of claim 10 is respectfully traversed.

Claim 11 is an independent apparatus claim having means-plus-function limitations. For the reasons discussed above, Craig does not have the claimed "transaction processing means" or the claimed "video processing means". Nevertheless, in rejecting claim 11, the Examiner finds:

...without passing the requested VOD program through the transaction processing means and from streaming the requested VOD program at a 1<sup>st</sup> time to the 1<sup>st</sup> requesting means and at a 2<sup>nd</sup> and later time to the 2<sup>nd</sup> requesting means (Col. 13, lines 45-61; Col. 15, lines 8-20; Col. 16, lines 60-65).

This statement is legally irrelevant, because it does not address the claimed limitation. The issue is not whether the more than one subscriber can be supplied data from the same stream as indicated at column 16, lines 64-65, but that multiple streams are produced from a single memory copy of the video data. Therefore, the rejection of claim 11, and all claims depending therefrom, is respectfully traversed, because the Examiner admits that Craig does meet the limitations of the claim.

Claim 12 depends from claim 11 and further limits the "requesting means" to a "subscriber box". As explained above, Craig does not meet the limitations from claim 11. Therefore, Craig cannot meet the further limitations of claim 12 which depends therefrom. The rejection of claim 12 is respectfully traversed.

Claim 14 depends from claim 13 and further limits the claimed "video processing means". The Examiner admits that Craig does not anticipate claim 13<sup>1</sup> from which claim 14 depends. Therefore, Craig does not anticipate claim 14, as a matter of law. The rejection of claim 14 is respectfully traversed.

Claim 15 depends from claim 11 and further limits the claimed transaction processing means. For the reasons stated above, Craig does not have the claimed transaction processing means. Therefore, Craig cannot have these further limitations. The rejection of claim 15 is respectfully traversed.

Claim 16 is an independent method claim having five basic steps. Craig does not meet elements c, d, or e, (i.e., "spooling" and two "streaming" steps), because Craig does not have the two different architectures for the transaction and video processors and because Craig does not produce two streams directly from the same memory copy of the video program as

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<sup>1</sup>On page 10 of the pending official action, the Examiner states: "Craig does not clearly disclose the industry (sic) computer (control server 570) is a standard personal computer."

claimed. The rejection of claim 16, as amended and all claims depending therefrom, is respectfully traversed.

Claim 17 depends from claim 16 and further limits the two streaming steps. Craig cannot meet this limitation because it has no provision to service two non-coincident requests from two streams out of the same memory copy of the video program. The rejection of claim 17 is respectfully traversed.

Claim 18 depends from claim 17 and further defines the criterion for determining whether to generate one or two streams. Notwithstanding the Examiner's legally irrelevant statements relating to hardware passband limitations, Craig has no provision for this functionality. The rejection of claim 18 is respectfully traversed.

Claim 19 depends from claim 17 and is further limited by a "fast forward" streaming option. For the reasons stated above, Craig does not have this function because Craig employs a different and less efficient transmission technique. The rejection of claim 19 is respectfully traversed.

Claim 20 depends from claim 17 and is further limited by "performing subscriber accounting to enable billing said first subscriber for said video on demand request". In making his rejection, the Examiner cites Craig, column 7, lines 9-12, which states:

The session manager also maintains a record of relevant data regarding each session which is forwarded to a customer billing system.

Thus, the Examiner's rejection is legally irrelevant, because it does not address Applicants' invention. The claim requires "performing subscriber accounting....". Craig simply collects data. The rejection of claim 20 is respectfully traversed for failure of Craig to meet the requirements of MPEP 2131.

Claim 21 is an independent apparatus claim. In making his rejection, the Examiner states:

Claim 21, is analyzed with respect to claim 11. Claim 11 is an independent apparatus claim having means-plus-function limitations. As such, it must be examined in accordance with MPEP 2181 et seq. Claim 21 does not have means-plus-function limitations. Therefore, claim 21 is not to be examined in accordance with MPEP 2181 et seq as a matter of law. The Examiner has been reminded of the legal distinction between claims 11 and 21 and has apparently chosen to ignore controlling law. The rejection of claim 21 is respectfully traversed as not properly examined.

Claims 22 and 23 each depend from claim 21. Claim 22 further limits the first architecture and claim 23 further limits the second architecture. As explained above, Craig says nothing of the architectures of the various computational components. The rejections of claims 22 and 23 are respectfully traversed.

Claim 24 depends from claim 21 and further limits the memory. For the reasons stated above, Craig does not have the claimed memory. Therefore, Craig cannot have these further limitations. The rejection of claim 24 is respectfully traversed.

Claim 25 depends from claim 24 and further limits the claimed memory. For the reasons stated above, Craig does not have the claimed memory. Therefore, Craig cannot have these further limitations. The rejection of claim 25 is respectfully traversed.

Claims 3, 7-9, and 13 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Craig. The rejection of claims 3, 7-9, and 13, is respectfully traversed for failure of the Examiner to present a *prima facie* case of obviousness as specified by MPEP 2143.

To make a *prima facie* case of obviousness, MPEP 2143 requires the Examiner to provide evidence and argument showing: 1) motivation to make the alleged combination; 2) reasonable likelihood of success of the alleged combination; and 3) all claimed elements within the alleged combination. The Examiner has failed to make any of these three required showings. Therefore, because the Examiner has not made a *prima facie* case of obviousness, Applicants need not and indeed cannot offer appropriate evidence and argument in rebuttal.

In an apparent attempt to show motivation, the Examiner states:

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Craig's processor with "Windows NT based processor", i.e., Intel processor, so (sic) to take the advantage of the well known Intel processor that is fully compatible with Windows NT OS for reducing cost of maintenance and operation.

This statement is clearly erroneous in that Windows NT operates on machines which are not Intel processors.

More significant is that Craig specifically teaches against the modification alleged by the Examiner. Column 6, lines 58-64, states:

The function of establishing and monitoring connections linking a video library port transmitting selected information with the end user ports receiving the information is performed by a supervisory controller such as a network control system, e.g., FLEXCOM software, used to control the electronic digital cross-connect switches (DCS) in the PSTN.

The prior art contains no suggestion to change the controlling software to Windows NT as claimed. Therefore, the Examiner has failed to show motivation.

There is no showing that the system of Craig would operate at all in view of the alleged modification. Furthermore, the Examiner has not shown any reasonable likelihood of success as required by MPEP 2143.

Claim 3 depends from claim 2 and further limits the claimed second processor. As explained above, Craig does not disclose the claimed second processor. Therefore, Craig cannot have these further limitations. The rejection of claim 3 is respectfully traversed for failure of the Examiner to make any of the three showings required to present a *prima facie* case of obviousness.

Claim 7 depends from claim 6 and further limits the claimed video processor. For the reasons stated above, Craig does not have the claimed video processor. Therefore, Craig cannot have these further limitations. The rejection of claim 7 is respectfully traversed.

Claim 8 depends from claim 7 and further limits the claimed memory. For the reasons stated above, Craig does not have the claimed memory. Therefore, Craig cannot have these further limitations. The rejection of claim 8 is respectfully traversed.

Claim 9 depends from claim 8 and further limits the format of the video program. As explained above, Craig cannot meet the limitations of claim 8. Therefore, Craig cannot meet the further limitations of claim 9. The rejection of claim 9 is respectfully traversed.

Claim 13 depends from claim 12 and further limits the claimed video processing means. For the reasons stated above, Craig does not have the claimed video processing means.

Therefore, Craig cannot have these further limitations. The rejection of claim 13 is respectfully traversed.

Having thus responded to each objection and ground of rejection, Applicants respectfully request entry of this amendment and allowance of claims 1-25, being the only pending claims.


Please charge any deficiencies or credit any overpayment to Deposit Account No. 14-0620.

Respectfully submitted,

Ralph E. Sipple et al.

By their attorney,

Date July 6, 2006

  
\_\_\_\_\_  
Wayne A. Sivertson  
Reg. No. 25,645  
Suite 401  
Broadway Place East  
3433 Broadway Street N.E.  
Minneapolis, MN 55413  
(612) 331-1464